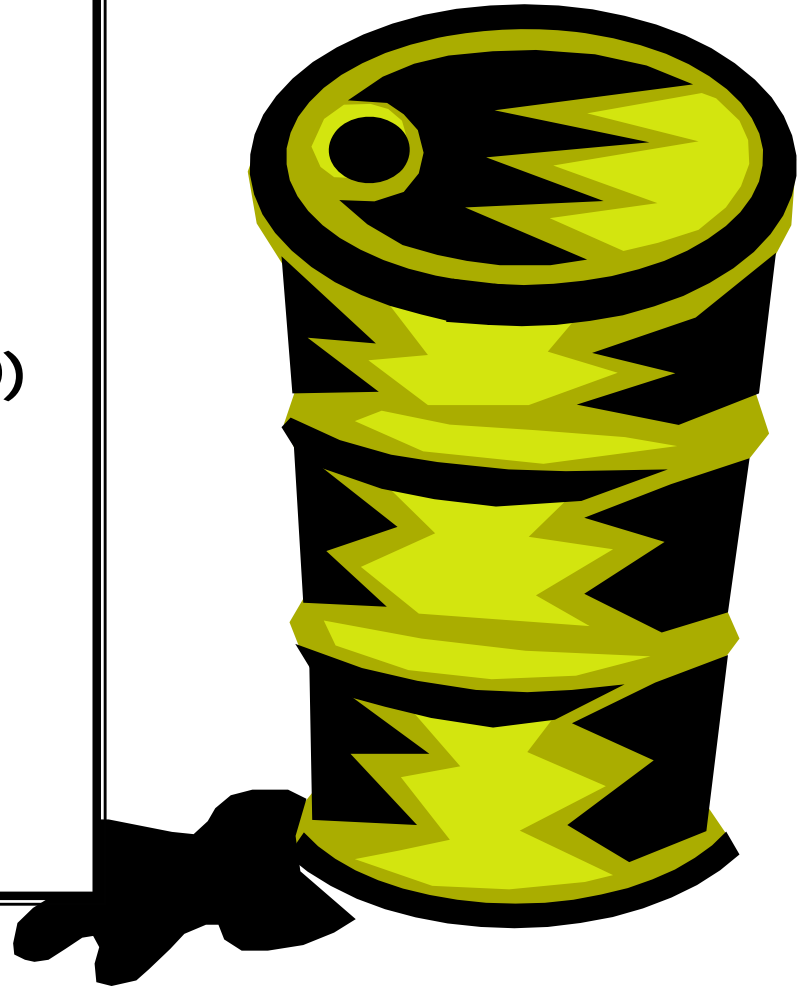
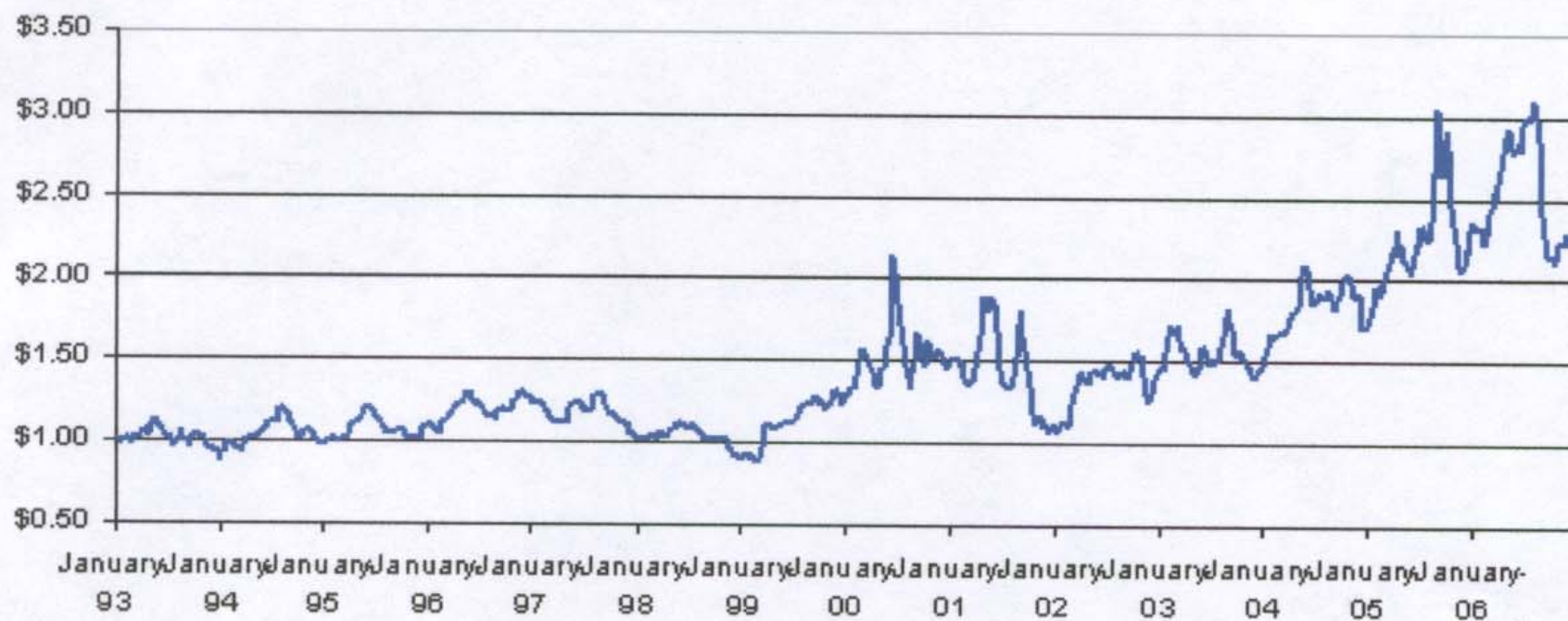


Renewable Fuels: Think Outside the Barrel!

**By: Robert G. Craig, Director
Agriculture Development Division (AgD)
Michigan Department of Agriculture
Michigan Harvesting Agri-Energy
Conference, March 13-14, 2007**

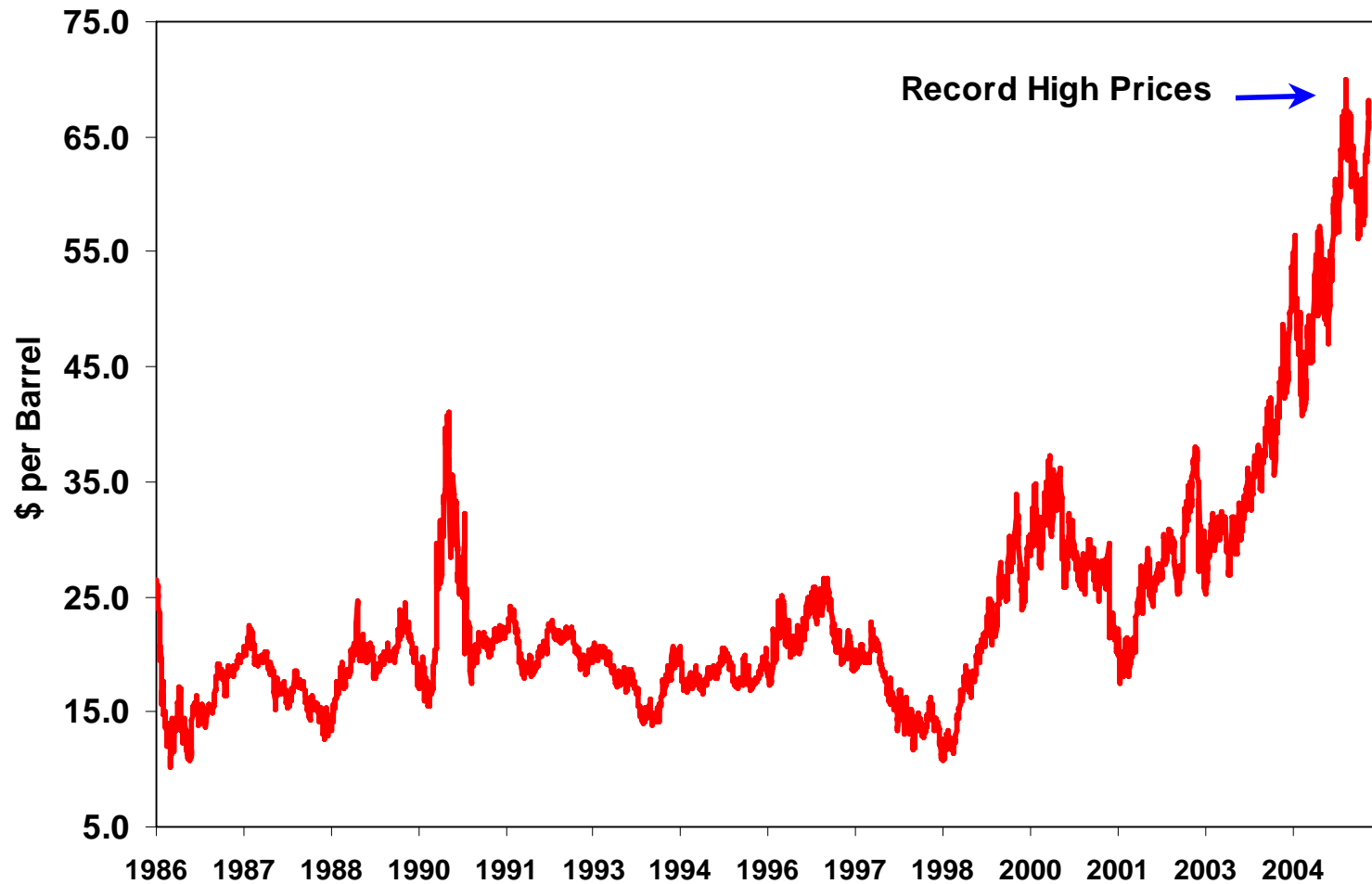


Self-Serve Unleaded Gasoline Prices, Detroit Metro Area
Weekly Prices - January 1993 to January 2nd 2007



Why are We Discussing Renewable Energy?

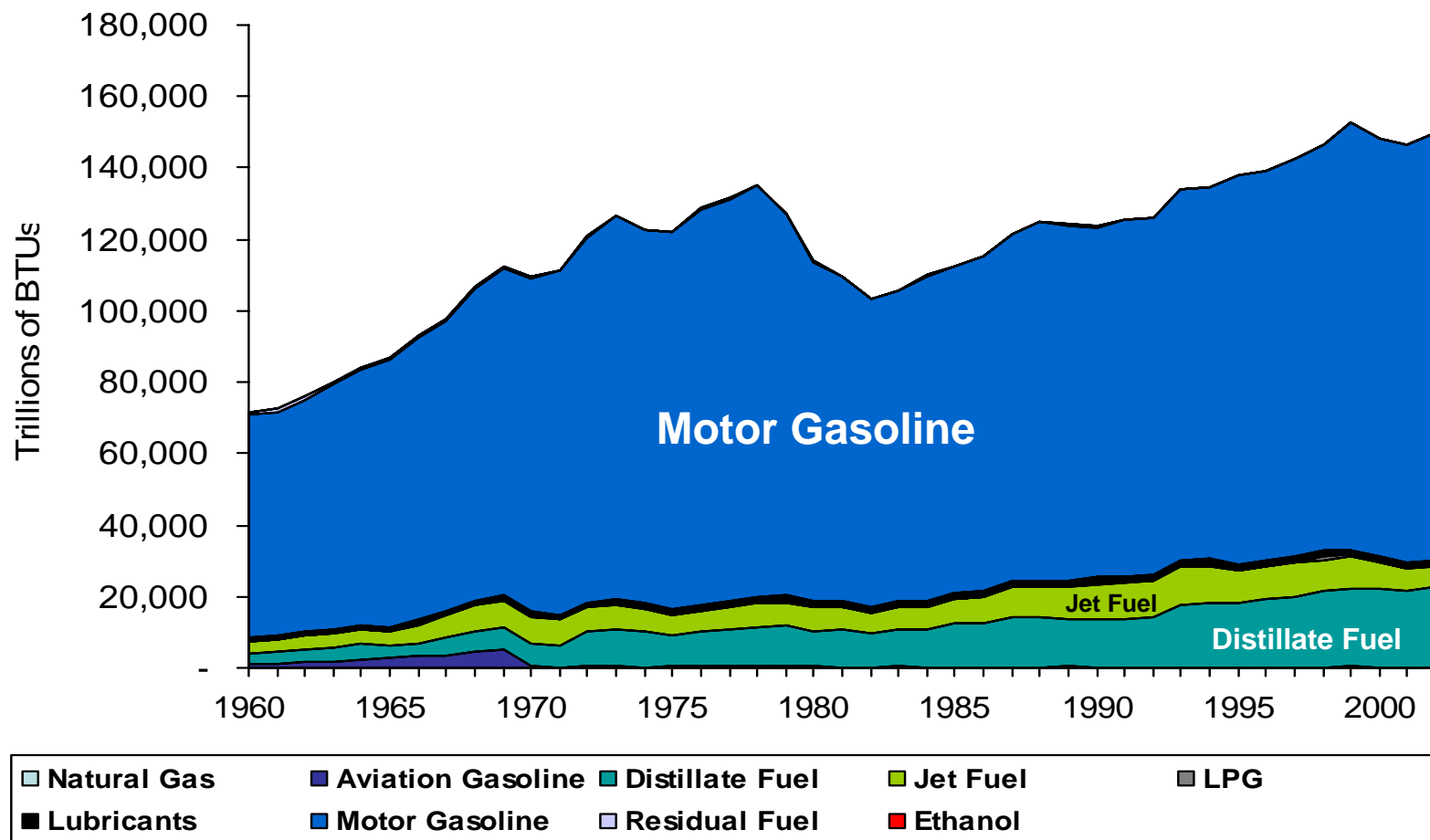
Record High Oil Prices, WTI



Source: DOE, Energy Review

Transportation Energy Use in Michigan

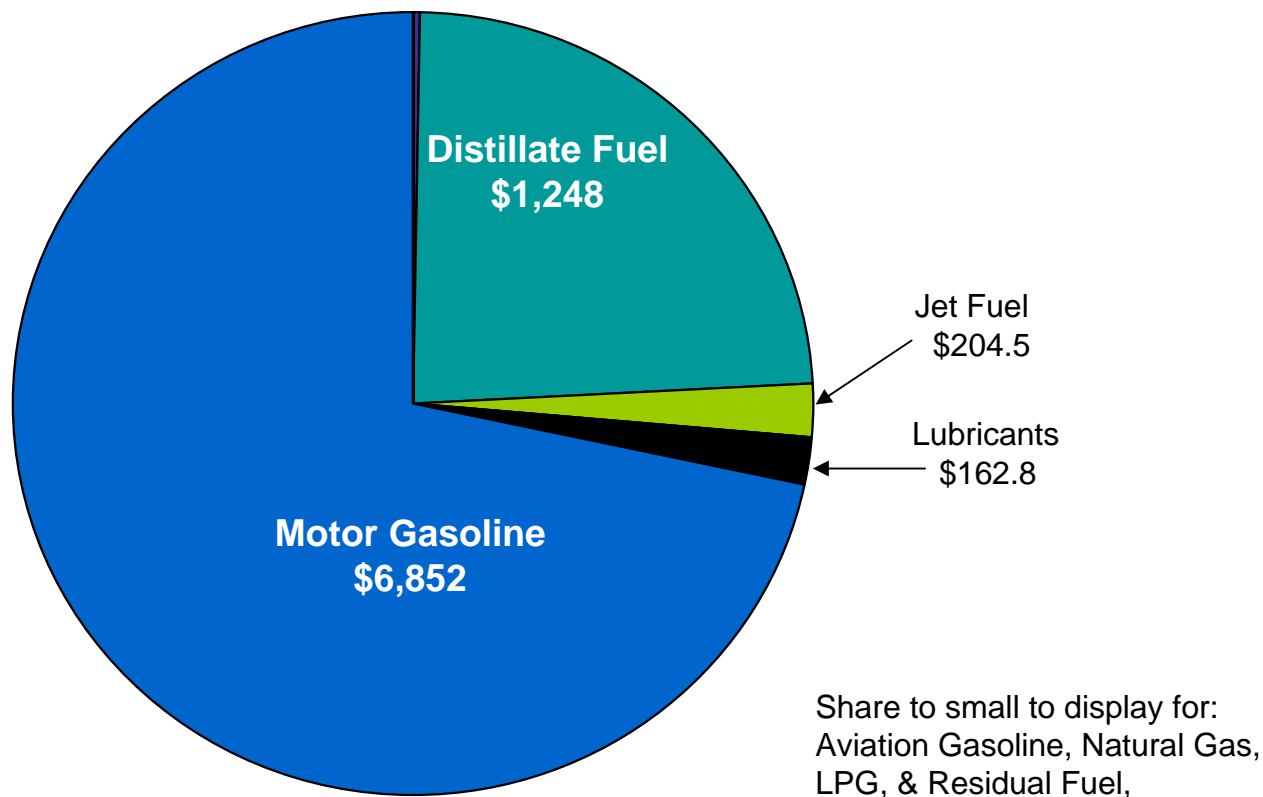
1960 to 2002



Source: State Energy Data Report, Energy Information Administration,
Graph prepared by: Energy Data and Security, Michigan Public Service Commission

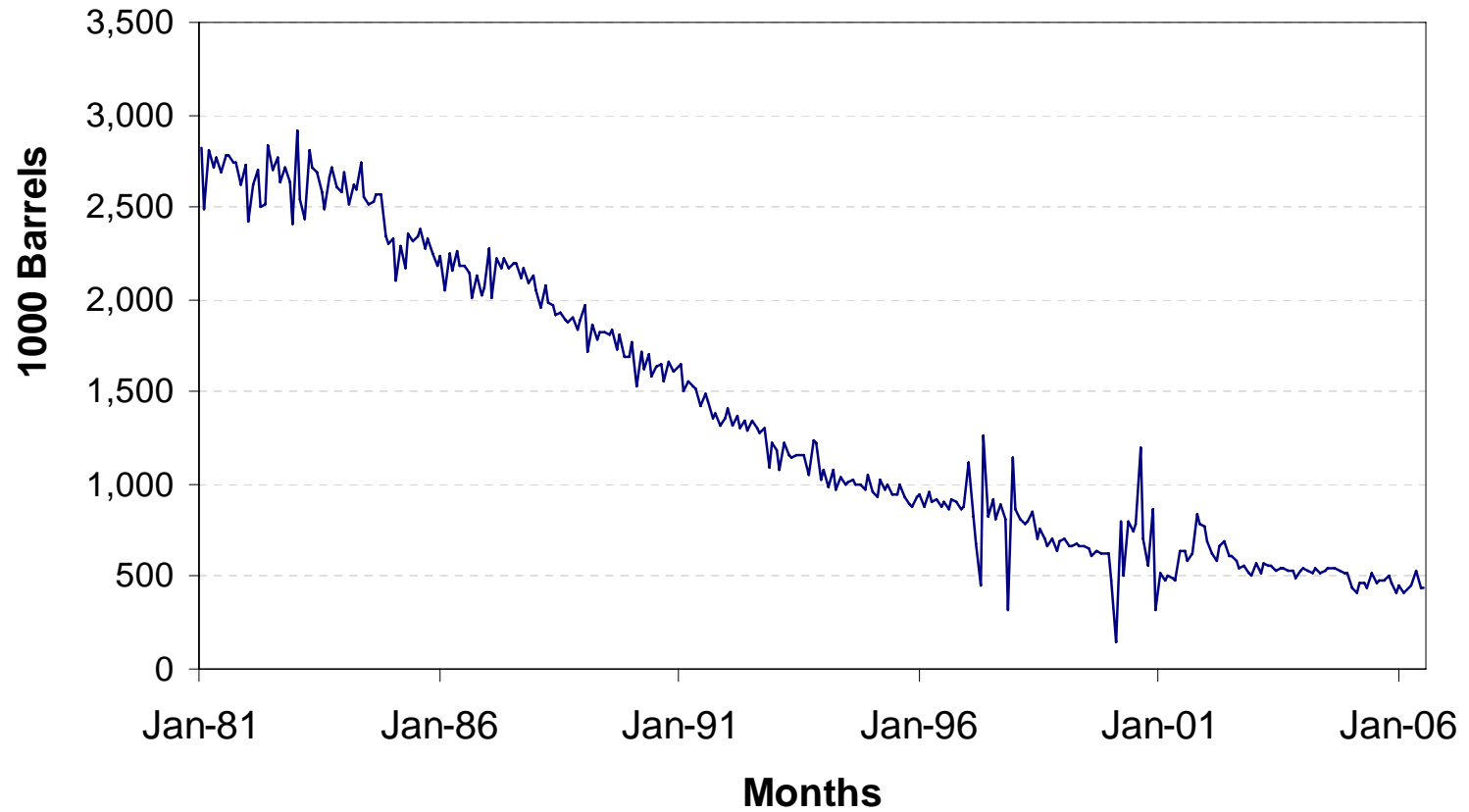
Transportation Energy Expenditure in Michigan

Millions of Nominal Dollars in calendar year 2002

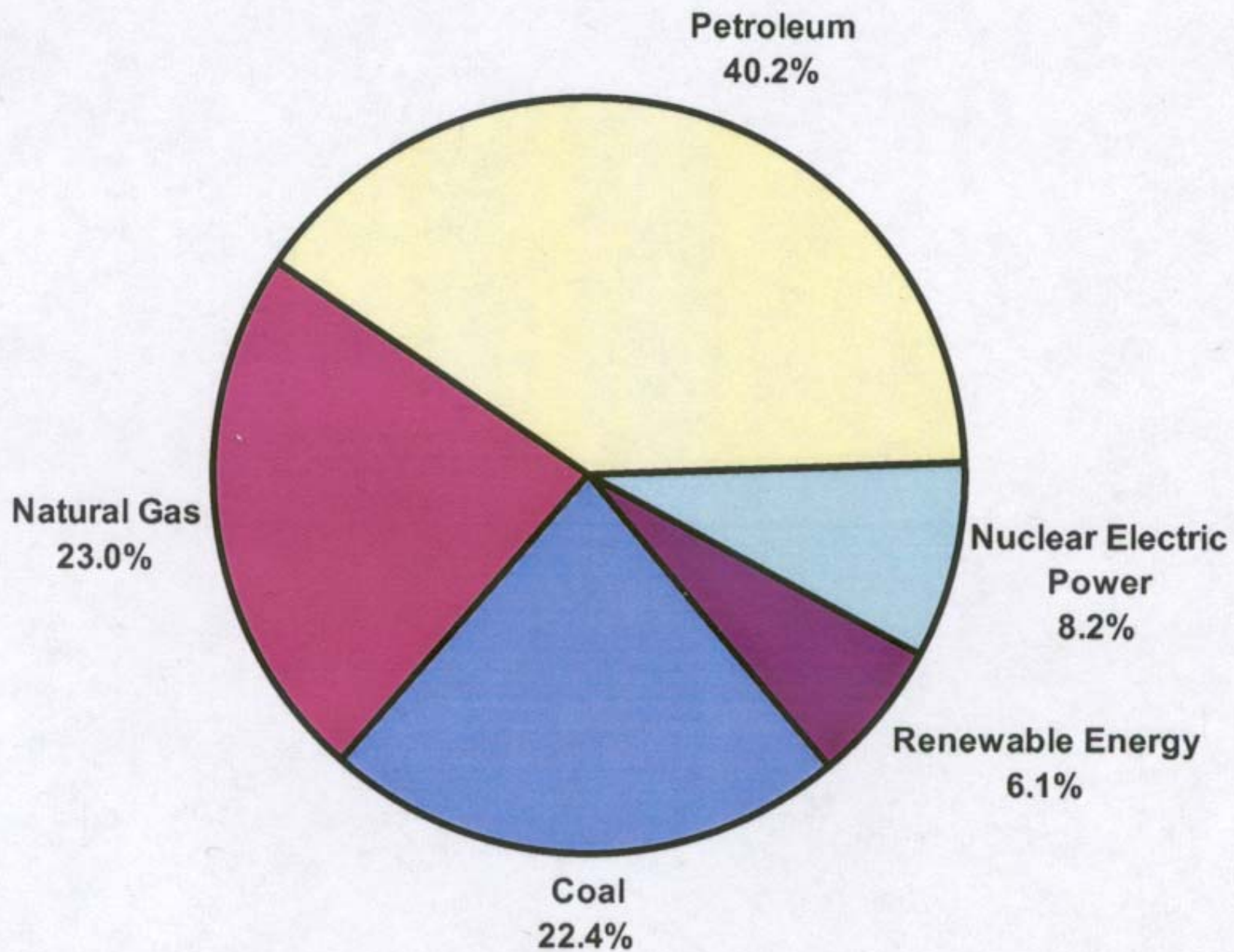


Source: State Energy Expenditures Report Energy Information Administration,
Graph prepared by: Energy Data and Security, Michigan Public Service Commission

Michigan Crude Oil Production

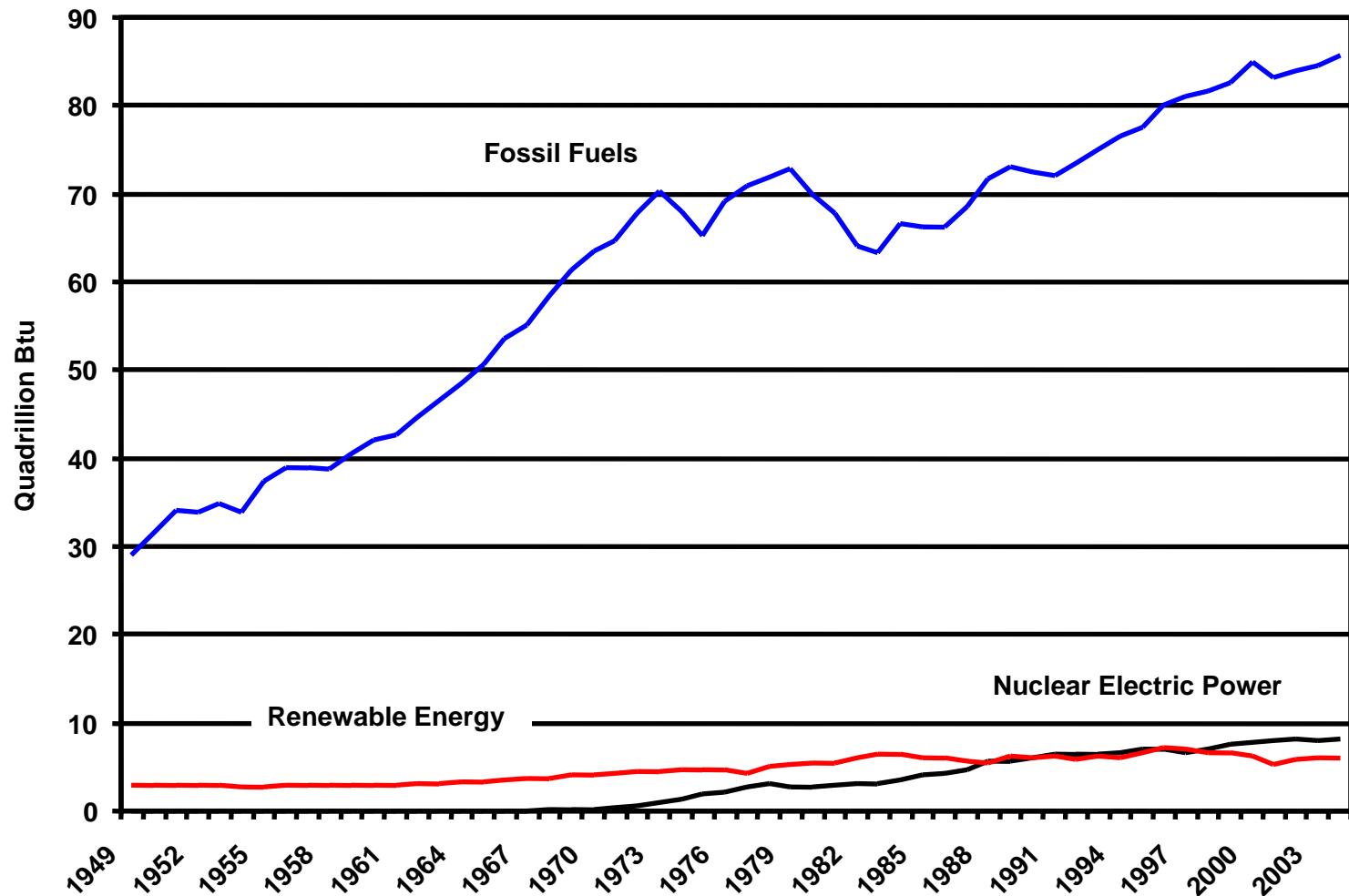


0: US Sources of Energy Consumed, 2004



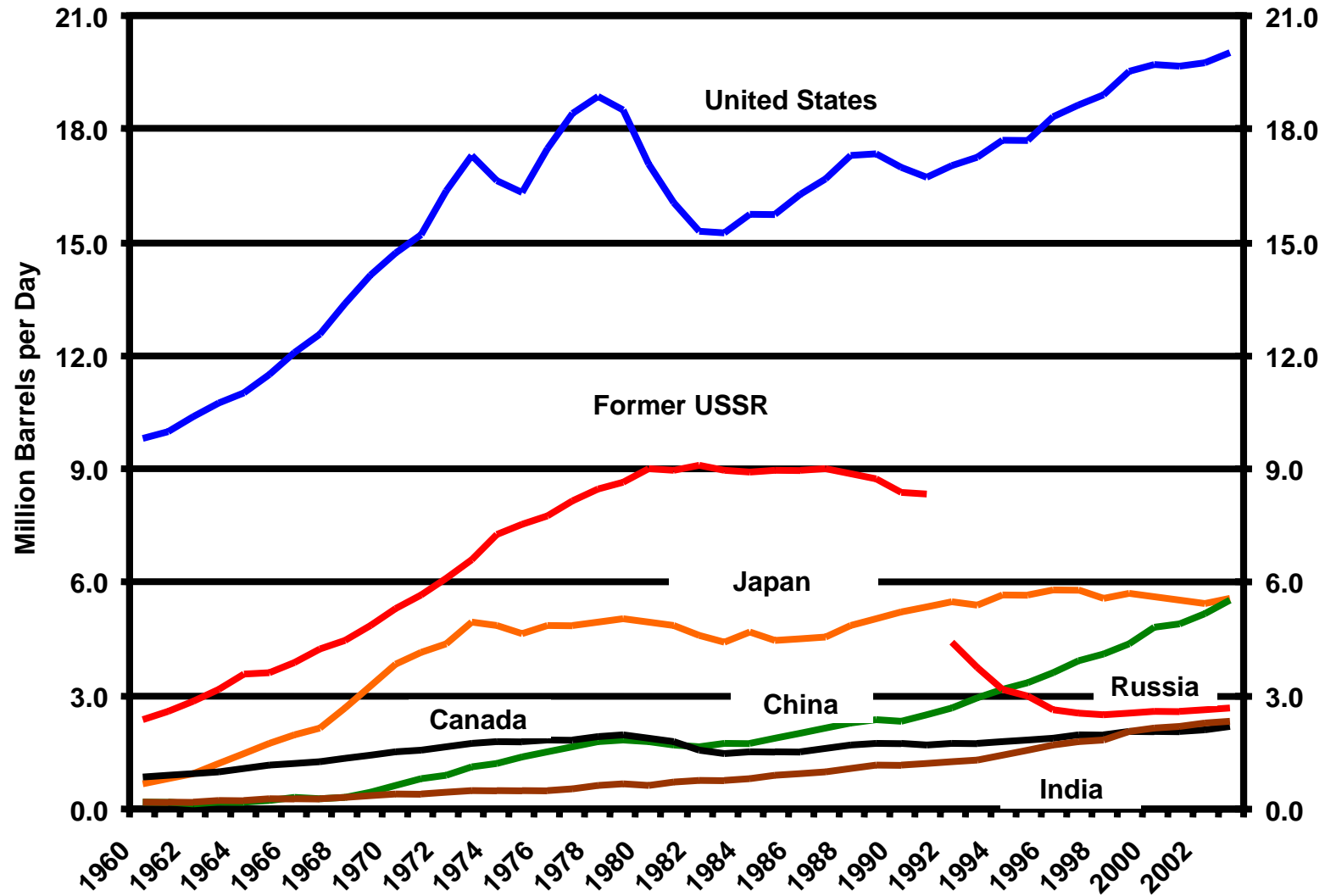
Renewables are a Drop in the Bucket, US Energy Consumption by Source

Energy Consumption by Source



The US and Everybody Else

World Petroleum Consumption



2006 State of State Address

“The State that put the world on wheels will be the state that makes those wheels independent of foreign oil.”

-Gov. Jennifer M. Granholm

- 21st Century Jobs Fund-\$2 billion, includes Alternative Energy as growth industry
- Michigan as the automotive capital and a powerhouse in agriculture and natural resources must demonstrate leadership and progress

Michigan's Alternative Energy Economic Development Goals

- 1,000 biofuel pumps by 2008
- In-state production of ethanol and biodiesel fuels producing jobs, new markets and capital investment
- Utilization of Alternative Fuel Vehicles

2006-7 Economic Development Progress in Michigan

- 4 ethanol plants open (Caro, Albion, Woodbury and Riga) and 1 other under construction, 6 more proposed. Total ethanol fuel production capacity by end of 2007: 250 MMG
- 3 biodiesel plants open (Gladstone, Bangor and Milan), 4 more proposed. Total biodiesel production capacity by end of 2007: 15-20 MMG
- More than 2,000 service stations offer 10% ethanol blended gasoline
- 41 E-85 stations open or will be soon
- 51 Biodiesel stations (B2-100) open or will be soon
- 240,000 E-85 Flexible Fuel Vehicles (2005 Estimate)
- 2% of Michigan vehicles are diesel, similar with U.S.



Michigan Ethanol LLC

- *40 million gallon plant in Caro*
- *\$60 million investment*
- *41 jobs*
- *\$110 million annual boost to local economy*

Ethanol Plants

● Operating

● Constructing

● Permits Applied

● Proposed

* In a Michigan Renaissance Zone

mmgy = million gallons per year
mm bu/y = million bushels per year
Source: Michigan Department of
Agriculture
November 28, 2006

North Star Ethanol, LLC
Manistee
50 mmgy proposed
about 19 mm bu/y

Liberty Renewable Fuels, LLC
Ithaca
121 mmgy proposed
43.2 mm bu/y

US Bio Woodbury*
Woodbury (Lake Odessa)
53 mmgy allowed
19.2 mm bu/y

NextGen Energy, LLC
Watervliet
58 mmgy proposed
22.3 mm bu/y

Michigan Ethanol*
Caro
63 mmgy allowed
23 mm bu/y

**The Andersons
Albion Ethanol, LLC***
Albion
57.75 mmgy allowed
21 mm bu/y

Great Lakes Ethanol, LLC*
(Midwest Grain Processors)
\$90 million
62 jobs

NextGen Energy, LLC
McBain
50 mmgy proposed
19 mm bu/y

M & M Energy
Alma
50 mmgy proposed
about 19 mm bu/y

Marysville Ethanol, LLC*
Marysville
55 mmgy allowed
23.1 mm bu/y

Ag Solutions, Inc. Gladstone, MI Bio-Diesel Plant



Biodiesel Plants

■ Operating

■ Constructing

■ Proposed

* In a Michigan Renaissance Zone

mmgy = million gallons per year

Source: Michigan Department of Agriculture

November 28, 2006

Ag Solutions, Inc.
Gladstone
10 mmgy allowed

Michigan Biodiesel, LLC*
Bangor
10 mmgy allowed

Liberty Renewable Fuels, LLC
Ithaca
5 mmgy

BioDiesel Industries, LLC
Detroit
5 mmgy

Milan Biodiesel, LLC

Adrian Biodiesel, LLC*
Adrian
10 mmgy allowed

Custom AgriSystems, LLC
Reading
10 mmgy
Includes oil seed crushing plant

Michigan Biofuels, LLC
Belleville
5 mmgy

New Public/Private Partnerships Formed



- April 18, 2006 Press Announcement of 20 new E-85 Pumps in Michigan in 2006-07

Higher Standards
meijer
Lower Prices

✓ 2006 Mich. Renewable Fuels Legislative Package Adopted

- S.B. 1074, Public Act 268
- S.B. 1075, Public Act 269
- S.B. 1078, Public Act 270
- S.B. 1079, Public Act 271
- H.B. 5181, Public Act 272
- H.B. 5752, Public Act 273
- H.B. 5754, Public Act 274

Highlights of 2006 Renewable Fuels Legislative Package

- Renewable fuels in Michigan temporarily taxed (E-85) 7 cents less and (B5-20+) biodiesel blends 3 cents less than regular fuel
- State of Michigan installs renewable fueling infrastructure at DMB motor transport facility for state employees and vehicles.
- 10 new Renewable Energy Renaissance Zones created as incentives to encourage development of biofuels facilities in Michigan. Also, 10 more Ag Processing Renaissance Zones.

- Renewable Fuels Commission created in MDA to recommend strategies in the promotion and R & D of biodiesel, ethanol and FFVs.
- Michigan Strategic Fund administers matching grant programs for incentives to service stations to sell alternative fuels.
- Finally, diesel fuel, biodiesel blends, and hydrogen fuels added to MDA's Motor Fuel Quality Act for fuel testing and inspection program.

Biodiesel Fuel Information & Supplier Lists

Michigan Soybean Promotion
Committee:

www.michigansoybean.org

National Biodiesel Board:

www.nbb.org

MDA: www.michigan.gov/mda

DLEG—State Energy Office

MSU Product Center for ANR

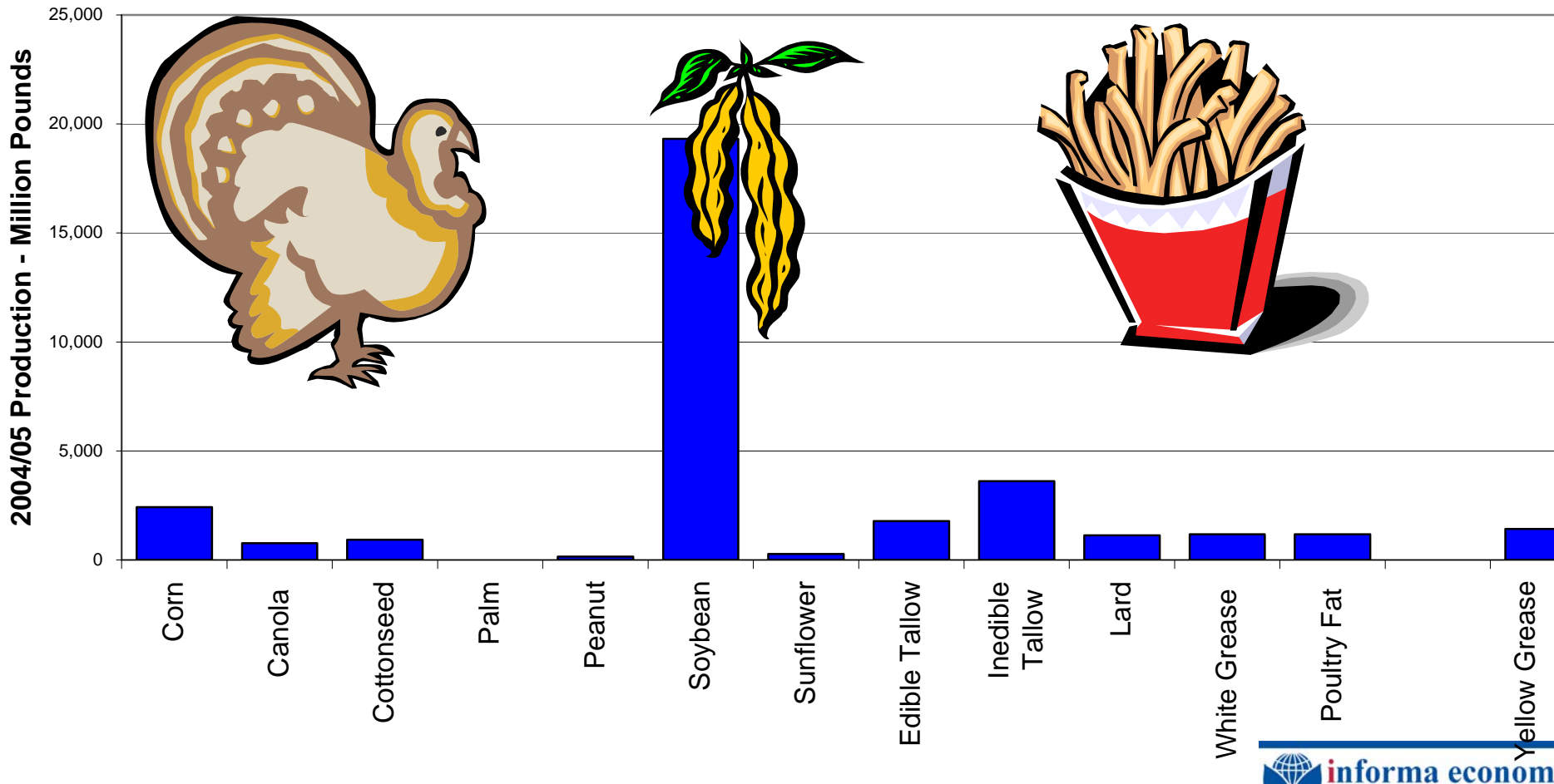
“Feasibility Study & Preliminary Business Plan for a Michigan Soybean Crush Plant, Soybean Oil Refinery and/or Biodiesel Production Plant in Gratiot County or Other Michigan Sites”



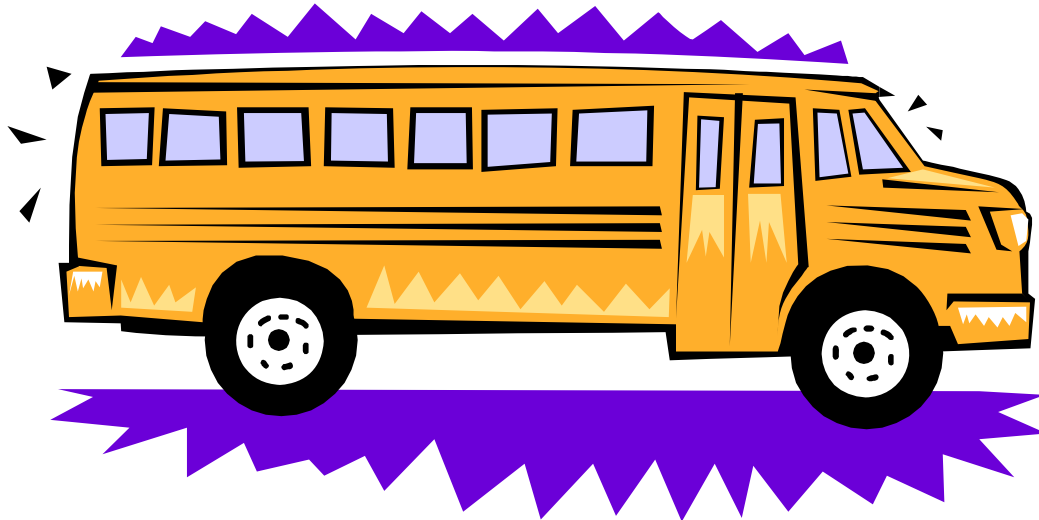
**Prepared by REMCO LLC & DeSmet Ballestra
For: The Michigan Department of Agriculture**

2006

Feedstock Supply Availability

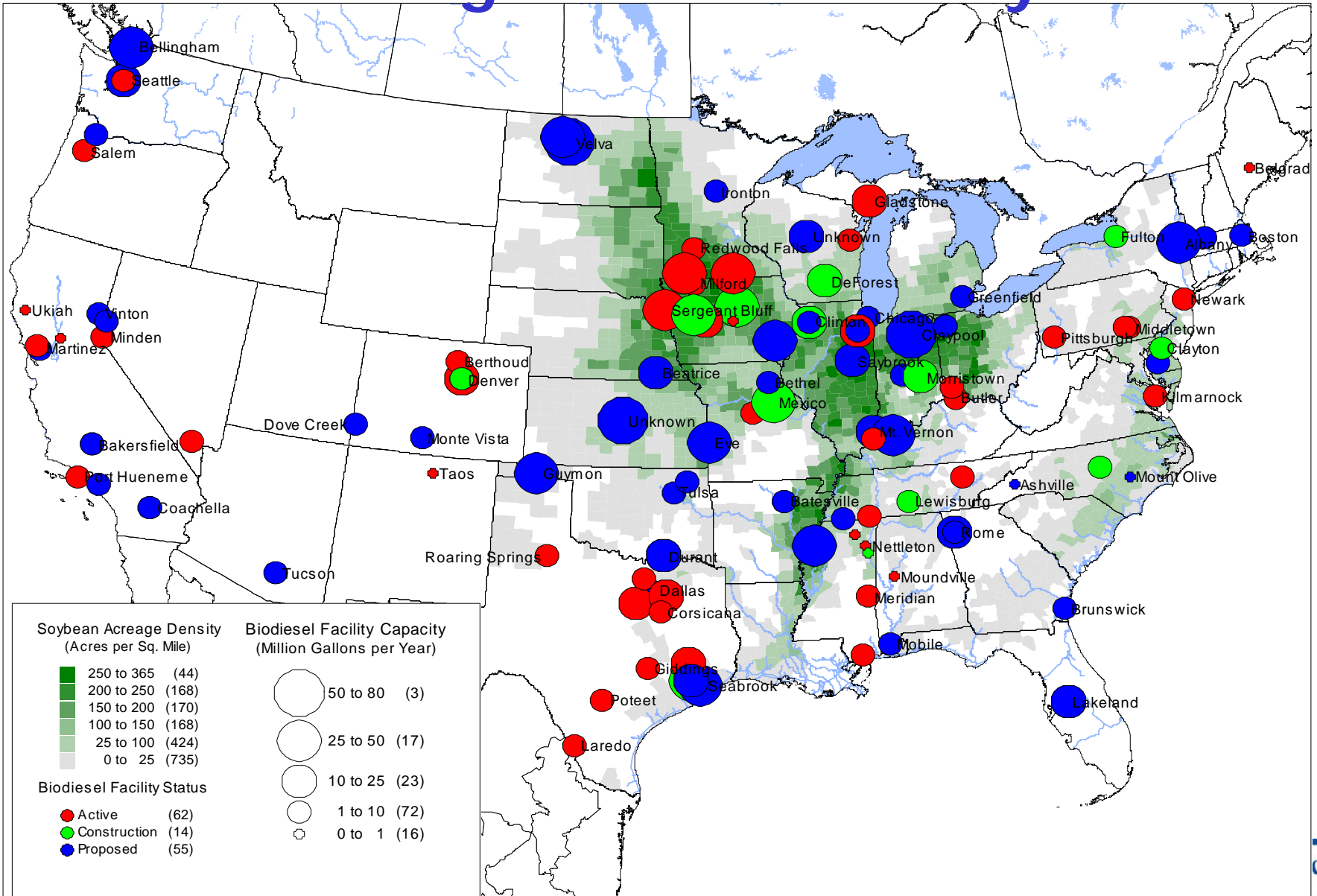


Michigan Fleets and Users of Biodiesel Fuel Blends



**Public School Districts
Federal, State and Municipal
Parks and Fleets
Truckers, Farmers and Boaters**

Biodiesel Facilities are Distributed Throughout the Country



Royal Dutch Shell Group Vision...

the beginning of the end of oil.

